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COTTON INSECT CONDITIONS -- JUNE 9, 1950
(Second Cotton Insect Survey Report for 1950)

The boll weevil situation continues serious. Fortunately thousands of farmers are making preparations to continue fighting the weevils with insecticides.

The cotton leafworm reached the United States earlier than in any of the past 5 years. It has been reported from nine counties in southern Texas. Insecticides are being used for its control.

INSECTICIDES

R. L. McGarr, San Benito, Texas, wired on June 8: "Additional supplies of calcium arsenate and toxaphene urgently needed for Lower Rio Grande Valley."

A second wire on June 15 stated: "Boll weevils very bad. Calcium arsenate critically short in Lower Valley. Can any more be obtained?"

OTHER COTTON INSECT SURVEY REPORTS

State and Federal agencies are cooperating in the cotton insect survey work in a dozen States. Survey reports that give more detailed information concerning cotton insect conditions in the States are being issued at intervals by the entomologists in North Carolina, Mississippi, Louisiana, Arizona, Oklahoma, Texas, and probably in other States.

Excerpts from Weekly Cotton Weather Bulletin issued by the Weather Bureau, U. S. Department of Commerce, New Orleans, Louisiana, June 13, 1950:

OKLAHOMA: Weather very favorable for weevil activity.

ARKANSAS: Weather moderately favorable for weevil activity.

LOUISIANA: Farm work at standstill except northwest where cultivation cotton, cutting hay, poisoning weevils active.

TENNESSEE: Heavy boll weevil infestation reported southwest.

GEORGIA: Weather very favorable for weevil activity.

SOUTH CAROLINA: Cotton progress and condition fairly good but weevil menace general.

NORTH CAROLINA: Weevil infestation begun.

BOLL WEEVIL

NORTH CAROLINA: If conditions continue favorable for the boll weevil during June and July, this pest is likely to cause serious losses in every county in the State in which cotton is grown. As recorded in the first cotton insect survey report for 1950, live boll weevils were found in surface trash during March in Cleveland County at the rate of 2,226 weevils per acre, in Rowan County at the rate of 2,660, and in

Lee County at the rate of 9,680. With weevils this abundant as far west as Cleveland County and as far north as Rowan and Lee Counties, there is every reason to assume that the weevils have survived the winter in large numbers at points west of Cleveland County and north of Lee and Rowan Counties.

Records are not available of the boll weevil occurring in as large numbers in surface woods trash as in Scotland County, where F. F. Bondy found them in the fall of 1949 at the rate of 18,231 per acre and in March 1950 at the rate of 15,972. High weevil populations were also found in the surface trash adjacent to cotton fields in Hoke, Lee, and Sampson Counties.

George D. Jones, Extension Entomologist, reported on June 9: "Weevil infestation is serious in all areas. At this time last year, out of 74 fields examined in eastern North Carolina only 36 were infested, with an average of one weevil per 100 plants. This year for the week ending June 9, out of 65 fields examined, all but three were infested and the average number of weevils per 100 plants was 12, almost 12 times as many as one year ago. An enormous number of weevils went into hibernation; the survival rate was high and all are not yet out of hibernation, according to present indications."

"Because of the large number of weevils now in the fields poisoning is strongly advised, even though squares are not yet formed. Weevil damage to young plants, before squares are formed, has resulted in killing of terminal growth. Young squares have been damaged in many fields, causing 'bushy' plants."

SOUTH CAROLINA: Boll weevils are continuing to emerge from hibernation cages at Florence at a high rate. Ninety-one weevils were removed from the cages during the week ending June 10 as compared with 72 the previous week. A total of 576 weevils have been removed from the cages through June 10 as compared with 442 in 1949; 7 in 1948; and 146 in 1947.

In the one-fifth acre trap plot of cotton at Florence 1,032 weevils were collected as compared with 649 the previous week. The number removed from the trap plot during the week ending June 10 is the largest number removed in one week since this plot was started in 1938 and is more than the total number removed during each year this trap plot has been examined with the exception of 1941, 1947, and 1949. To date 1,892 weevils have been collected in the plot. The collections from the trap plot through June 10 as compared with other years are as follows:

<u>Year</u>	<u>Weevils Collected</u>	<u>Year</u>	<u>Weevils Collected</u>
1950	1,892	1946	140
1949	1,092	1945	378
1948	351	1944	102
1947	902	1943	238

Boll weevils were found in all of the 84 fields examined in 17 counties at an average rate of 1,974 per acre. Weevil populations were high in all 17 counties ranging from 1,410 to 2,310 per acre. During the corresponding week in 1949 weevils averaged 563 per acre. In 1948, cotton was more advanced and an average of 17% of the squares was punctured. In 1947 weevils averaged 578 per acre. In 1946, the average infestation was 16% punctured squares and in 1945 it was 15%.

GEORGIA: Paul M. Gilmer, Tifton, reported May 31: "No fields examined are free of weevils." Each field had from 300 to 1,126 weevils per acre. Bud damage by weevils

has been extensive and serious. In unpoisoned fields with squares the infestations ranged from 40% to nearly 100% punctured squares.

In Terrell County, G. M. Sutton examined three fields where the cotton stalks had been destroyed early last fall and infestations averaged 3% punctured squares; while in three comparable fields in that county, where the stalks were not destroyed early last fall, the infestations ranged from 15% to 33%, and averaged 25% punctured squares.

ALABAMA: W. A. Ruffin, Extension Entomologist, wrote on May 20: "I have spent this week in the northern part of the State. The population of over-wintering weevils in this area is the highest that I have ever seen. By actual count we have found that from 500 to 3,000 (per acre) weevils are present in all fields. For the first time in my life I have seen weevils feeding on young, tender leaves in the same manner that the bean leaf beetle feeds on the foliage of beans. I have seen hundreds of stalks of cotton standing like a match stem stuck in the ground. The bud was killed and the leaves cut off by boll weevils."

During the week ending June 10, examinations were made in 131 fields in 12 counties and 107 were infested, with an average of 671 per acre in the infested fields, or 548 weevils per acre in all fields examined. The infestation was spotted in all counties; high in one field and few or none in adjacent fields. All of the 25 fields examined in Tallapoosa, Talladega, Blount, and Jefferson Counties were infested, and the infestations ranged from 70 to 1,960 weevils per acre.

TENNESSEE: There are probably more boll weevils in Tennessee now than during June of any previous year with the possible exception of 1923. During the week ending June 9, weevils were found in 20 of the 21 fields examined in Fayette, Hardeman, McNairy, and Shelby Counties at the average rate of 668 weevils per acre in the 21 fields examined. The weevil populations ranged from 100 to 1,500 weevils per acre in the infested fields. The one field in which no weevils were found is in Shelby County.

MISSISSIPPI: Clay Lyle, Entomologist, reported June 12: "The boll weevil population in Mississippi the past week again broke all records for this time of year. Examinations by Board inspectors and federal entomologists on 389 farms in 54 counties showed weevils present on 294 farms with an average of 620 per acre as compared with 487 last week and 369 a year ago. Only on 7 of the 389 farms were the plants large enough for square examinations.

"Weevils are much more numerous in the hills than in the Delta. Of 218 Delta farms, 124 had an average population of 263 per acre, while 170 out of 171 hill farms averaged 885 per acre. The only hill farm on which no weevils were found had just been poisoned."

Of 209 fields examined in 16 counties in the Delta, during the week ending June 9, 119 were infested at an average rate of 240 in infested fields or 136 weevils per acre in all fields. This is the highest boll weevil population in the Delta counties at this season of the year since the establishment of the laboratory at Stoneville in 1934. One year ago 147 fields were examined in 17 Delta Counties and 73 were infested with an average of 202 per acre in the infested fields, or 87 weevils per acre in all fields examined.

LOUISIANA: In Madison Parish, boll weevils continue to emerge in hibernation cages in large numbers. During the week ending June 8, the percentage of weevil emergence was 1.94. The total emergence from May 1 to June 8, was 10.38%. During the 19-year period, 1932 to 1950, emergence was higher through June 8 in only two years (1941

and 1937) than in 1950. The emergence from May 1 to June 8 as compared with past years is as follows:

: Boll Weevil Survival		: Boll Weevil Survival	
Year : in Hibernation Cages		Year : in Hibernation Cages	
: from May 1 to June 8		: from May 1 to June 8	
	Percent		Percent
1950	10.38	1940	.02*
1949	3.76	1939	1.90
1948	.36	1938	.72
1947	1.22	1937	12.52
1946	7.36	1936	.10
1945	10.02	1935	.48*
1944	1.50	1934	3.82
1943	.76	1933	.36
1942	.06	1932	7.34
1941	11.24		

*Emergence completed

In Madison Parish, 67,000 cotton plants were examined in 67 fields from May 31 to June 6, finding an average of 657 boll weevils per acre, which was the largest number found in any year during the 19-year period, 1932 to 1950. The average number of weevils per acre as compared with past years is as follows:

: Plants : Weevils : Weevils :				: Plants : Weevils : Weevils :			
Year : Examined : Found : Per Acre :				Year : Examined : Found : Per Acre :			
1950*	67,000	2,447	657	1940	77,000	136	32
1949	42,000	663	284	1939	59,000	401	122
1948	53,000	387	131	1938	50,000	306	110
1947	56,000	652	210	1937	50,000	128	46
1946	46,000	926	362	1936	34,000	29	15
1945	62,000	734	213	1935	40,000	552	250
1944	92,200	461	90	1934	15,000	464	563
1943	60,000	824	247	1933	36,000	846	419
1942	76,000	207	49	1932	34,200	897	474
1941	72,000	1,437	359				

*June 1 to June 8

In one field examined in Concordia Parish weevils were found at the rate of 1,620 per acre; in 20 fields in Catahoula, Grant, Ouachita, Rapides, and Tensas Parishes weevils averaged 211 per acre and in 8 fields in Tensas Parish they averaged from 90 to 487 per acre.

TEXAS: Boll weevil infestations in the Lower Rio Grande Valley increased in scattered fields following recent rains. Insecticides are being applied in a number of fields for weevil control.

Following the rains of early June weevils continued to emerge from hibernation in central, northern, and eastern areas and now occur in large numbers especially in unpoisoned fields near hibernation quarters. Some fields in Lamar and Red River Counties showed as high as 2,500 weevils per acre. In many fields weevils are injuring the plants by feeding.

Examinations made in 147 fields of seedling cotton in 19 counties averaged 232 weevils per acre. The average square infestation in 175 fields in 23 counties was 16%. No punctured squares were found in 38 fields; in 66 fields less than 10% of

the squares were punctured; in 27 fields from 11 to 25%; in 29 fields from 26 to 50%; and in 15 fields more than 50% of the squares were punctured.

In 39 fields of seedling cotton examined in McLennan and Falls Counties weevils were found at the rate of 64 per acre. In 23 untreated fields weevils were found at the rate of 93 per acre. Weevils were found in 5 of 16 fields which had received one treatment for thrip control. These fields are located in the river bottom and averaged 23 weevils per acre. During the corresponding week last year weevils were found in 39 of 44 fields examined at an average rate of 126 per acre.

OKLAHOMA: Boll weevils occurred in large numbers through the eastern section of the State. Weevils are very numerous in McIntosh, Le Flore, and Marshall Counties. Examinations made in 95 fields in 13 counties averaged 227 weevils per acre.

COTTON LEAFWORMS

TEXAS: The first cotton leafworms collected in the United States during 1950 were taken by H. L. Bales about 20 miles east of Zapata in Zapata County, on May 10. The second finding of the leafworm was made by Douglas Early near Olmote, Cameron County, May 11. The leafworm has now been reported from nine counties: Calhoun, Cameron, Duval, Kleberg, Maverick, Nueces, Refugio, San Patricio, and Zapata. Leafworms are now becoming widespread and are building up to some extent in the Lower Rio Grande Valley and across the river in the adjacent cotton area of Mexico. Poisoning for leafworm control has been necessary, especially in areas where flood rains recently occurred. Spotted ragging has occurred in Kleberg and Nueces Counties. A few fields in Nueces County need control measures for this insect. The northern limit of known infestation remains Calhoun County, the same as last week.

COTTON FLEAHOPPER

TEXAS: At Waco, during the week ending June 9, 11 fleahopper nymphs emerged from 7 cages under observation. This brings the seasonal total to 5,264. At this time in 1949 and 1948, totals of 15,346 and 26,913, respectively, had emerged from corresponding host plant collections.

Examinations made in 299 fields in 35 counties averaged 3.6 fleahoppers per 100 terminals. No fleahoppers were found in 144 of the fields examined. In 126 fields, less than 10 fleahoppers per 100 terminals were found; in 18 fields from 11 to 25; in 9 fields from 26 to 50; and in 2 fields more than 50 fleahoppers per 100 terminals were found.

OKLAHOMA: Only one cotton fleahopper was observed in the examination of 85 cotton fields in 11 counties in Oklahoma and no reports of cotton fleahopper injury have been received from any State except Texas.

THE BAGWORM, THYRIDOPTERYX EPHEMERAEFORMIS (HAW.)

VIRGINIA: G. Mallory Boush, Assistant Entomologist, of the Virginia Agricultural Experiment Station, Tidewater Field Station, Holland, Virginia, wrote on June 13:

"Yesterday I was asked to go to Newsoms, in Southampton County, to examine some cotton that was being attacked by a very curious insect.

"This seven-acre field of cotton was heavily infested with bagworms. There were two

or three bagworms on each leaf and they seemed to be rather universal over the entire field. The field was bordered on the north by some large eastern red cedars, and these trees were almost stripped of their foliage by bagworms, Thyridopteryx ephemeræformis (Haw.). The young bagworms which could be found on the cedar appeared to be the same as those found on the cotton. I am sending under separate cover specimens from both the cedar and the cotton. It would seem that the young bagworms moved onto the cotton after their primary source of food was destroyed."

H. W. Capps, of the Division of Insect Identification, verified the determination of insects that were submitted by Mr. Boush. It is unusual for the bagworm to cause serious damage to cotton but occasional reports of injury to cotton have been received from other States in past years.

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